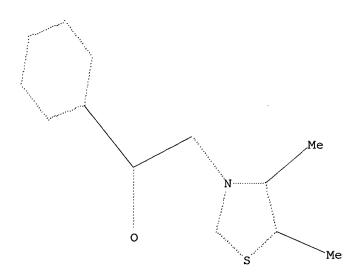
=> d que stat L1STR



Structure attributes must be viewed using STN Express query preparation. L3  $\frac{47}{7}$  SEA FILE=REGISTRY SSS FUL L1

L471 SEA L3

L81 SEA FILE=REGISTRY HYDROCHLOROTHIAZIDE/CN

L9 25687 SEA L8

L11 2 SEA L4 AND L9

### => d his full

(FILE 'HOME' ENTERED AT 16:27:23 ON 04 AUG 2005)

FILE 'REGISTRY' ENTERED AT 16:27:31 ON 04 AUG 2005

L1 STRUCTURE UPLOADED

D L1

L2 1 SEA SSS SAM L1 D SCAN L2 1

L3 47 SEA SSS FUL L1

FILE 'MEDLINE, HCAPLUS, BIOSIS, EMBASE' ENTERED AT 16:34:33 ON 04 AUG 2005

L4 71 SEA L3

L5 63 DUP REM L4 (8 DUPLICATES REMOVED)

L6 18 SEA L5 AND (SYSTOL? OR HYPERTENS? OR DIASTOL? OR BLOOD(2A)

PRESSUR? OR ANTIHYPERTENS? OR ANTI(W) HYPERTENS? OR VASCULAR(2A

) RESIST?)

L7 0 -SEA L6 AND HYDROCHLOROTHIAZ?

FILE 'REGISTRY' ENTERED AT 16:41:54 ON 04 AUG 2005

E HYDROCHLOROTHIAZIDE/CN

L8 1 SEA HYDROCHLOROTHIAZIDE/CN

D L8 1

FILE 'MEDLINE, HCAPLUS, BIOSIS, EMBASE' ENTERED AT 16:42:33 ON 04 AUG 2005

L9 25687 SEA L8

L10 0 SEA L6 AND L9

D L6 ABS CBIB KWIC HITSTR 1-18

FILE 'STNGUIDE' ENTERED AT 16:43:52 ON 04 AUG 2005

FILE 'MEDLINE, HCAPLUS, BIOSIS, EMBASE' ENTERED AT 16:45:53 ON 04 AUG 2005

L11 2 SEA L4 AND L9

D L11 ABS CBIB KWIC HITSTR 1-2

FILE 'MEDLINE' ENTERED AT 16:42:33 ON 04 AUG 2005

FILE 'HCAPLUS' ENTERED AT 16:42:33 ON 04 AUG 2005
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
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=> d his

(FILE 'HOME' ENTERED AT 16:27:23 ON 04 AUG 2005)

FILE 'REGISTRY' ENTERED AT 16:27:31 ON 04 AUG 2005

L1 STRUCTURE UPLOADED

L2 1 S L1 SSS SAM

L3 47 S L1 SSS FULL

FILE 'MEDLINE, HCAPLUS, BIOSIS, EMBASE' ENTERED AT 16:34:33 ON 04 AUG 2005

L4 71 S L3

L5 63 DUP REM L4 (8 DUPLICATES REMOVED)

L6 18 S L5 AND (SYSTOL? OR HYPERTENS? OR DIASTOL? OR BLOOD(2A) PRESSUR

L7 0 S L6 AND HYDROCHLOROTHIAZ?

FILE 'REGISTRY' ENTERED AT 16:41:54 ON 04 AUG 2005

E HYDROCHLOROTHIAZIDE/CN

L8 1 S E3

FILE 'MEDLINE, HCAPLUS, BIOSIS, EMBASE' ENTERED AT 16:42:33 ON 04 AUG 2005

=> s 18

L9 25687 L8

=> s 16 and 19

L10 0 L6 AND L9

=> d 16 abs cbib kwic hitstr 1-18

L6 ANSWER 1 OF 18 HCAPLUS COPYRIGHT 2005 ACS on STN A review. Although the features of diabetic cardiomyopathy, AB atherosclerosis, and nephropathy have been clin. characterized, the pathogenesis and the mechanisms underlying the abnormalities in the diabetic heart and kidney are not fully understood. During the past several years, in an attempt to discover interventions for diabetes-related complications, researchers have refocused their attention from the hemodynamic aspects of the disease to the biochem. interactions of glucose and proteins. Diabetes is a disorder of chronic hyperglycemia, and glucose participates in diabetic complications such as atherosclerosis, cardiac dysfunction, and nephropathy. Chronic hyperglycemia accelerates the reaction between glucose and proteins and leads to the formation of advanced glycation end products (AGE), which form irreversible cross-links with many macromols. such as collagen. In

diabetes, these AGE accumulate in tissues at an accelerated rate. The development of the novel compound dimethyl-3-phenacylthiazolium chloride (alagebrium chloride), which chemical breaks AGE cross-links, led to several preclin. animal studies that showed an attenuation or reversal of disease processes of the heart and kidney. In diabetes, AGE not only structurally stiffen structural collagen backbones but also act as agonists to AGE receptors (RAGE) on various cell types, which stimulate the release of profibrotic growth factors, promote collagen deposition, increase inflammation, and ultimately lead to tissue fibrosis. In the heart, large vessels, and kidney, these reactions produce diastolic dysfunction, atherosclerosis, and renal fibrosis. Administration of the cross-link breaker alagebrium chloride in these diabetic animals attenuates these pathol. phenomena, restoring functionality to the heart, vasculature, and kidney.

2004:1089060 Document Number 143:4827 Importance of advanced glycation end products in diabetes-associated cardiovascular and renal disease. Cooper, Mark E. (Danielle Alberti Centre for Diabetic Complications, Wynn Domain, Vascular Division, Baker Heart Research Institute, Melbourne, Australia). American Journal of Hypertension, 17(12, Pt. 2), 31S-38S (English) 2004. CODEN: AJHYE6. ISSN: 0895-7061. Publisher: Elsevier Inc.

AB . . . collagen deposition, increase inflammation, and ultimately lead to tissue fibrosis. In the heart, large vessels, and kidney, these reactions produce diastolic dysfunction, atherosclerosis, and renal fibrosis. Administration of the cross-link breaker alagebrium chloride in these diabetic animals attenuates these pathol. phenomena,.

IT 341028-37-3, Alagebrium chloride

RL: BSU (Biological study, unclassified); PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses) (alagebrium chloride break AGE receptor agonist AGE cross links in chronic hyperglycemia, attenuates pathol. phenomena, restoring functionality of heart, vasculature and kidney in rat and mouse model)

341028-37-3, Alagebrium chloride
RL: BSU (Biological study, unclassified); PAC (Pharmacological activity);
THU (Therapeutic use); BIOL (Biological study); USES (Uses)
 (alagebrium chloride break AGE receptor agonist AGE cross links in chronic hyperglycemia, attenuates pathol. phenomena, restoring functionality of heart, vasculature and kidney in rat and mouse model)
341028-37-3 HCAPLUS

CN Thiazolium, 4,5-dimethyl-3-(2-oxo-2-phenylethyl)-, chloride (9CI) (CA INDEX NAME)

IT

RN

● cl-

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L6
    ANSWER 2 OF 18 HCAPLUS COPYRIGHT 2005 ACS on STN
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AB A review. Advanced glycation end product (AGE) formation that occurs with aging and diabetes leads to the crosslinking of proteins and subsequent changes in the physicochem. properties of tissues. Cellular responses to AGE that lead to either pathol. conditions or removal of AGE are mediated by a number of receptors that have been identified on various cell types such as macrophages, endothelial cells, and smooth-muscle cells. Mechanisms by which AGE affect the cardiovascular system include AGE crosslinking of long-lived proteins such as collagen and elastin and altered cellular responses. Alagebrium (3-phenacyl-4,5-dimethylthiazolium chloride, ALT-711) is the first drug in a new class of thiazolium therapeutic agents that break established AGE cross-links between proteins. In animal studies, alagebrium was effective in reducing large artery stiffness, slowing pulse-wave velocity, enhancing cardiac output, and improving left ventricular diastolic distensibility. In human studies to determine safety and efficacy, alagebrium was safe and well tolerated. In the first phase 2 clin. study, alagebrium improved arterial compliance in elderly patients with vascular stiffening. In two subsequent phase 2 clin. studies, one addressing diastolic heart failure and the other addressing systolic hypertension, alagebrium was effective in improving cardiac function and uncontrolled systolic blood pressure, particularly in more severely affected patients. Addnl. clin. studies to determine the utility of alagebrium in treating cardiovascular disorders associated with aging are in progress. 2004:1089059 Document Number 143:4826 Advanced glycation end-product cross-link breakers: A novel approach to cardiovascular pathologies related to the

aging process. Bakris, George L.; Bank, Alan J.; Kass, David A.; Neutel, Joel M.; Preston, Richard A.; Oparil, Suzanne (Rush University Medical Center, Chicago, IL, USA). American Journal of Hypertension, 17(12, Pt. 2), 23S-30S (English) 2004. CODEN: AJHYE6. ISSN: 0895-7061. Publisher: Elsevier Inc..

. . animal studies, alagebrium was effective in reducing large artery AB stiffness, slowing pulse-wave velocity, enhancing cardiac output, and improving left ventricular diastolic distensibility. In human studies to determine safety and efficacy, alagebrium was safe and well tolerated. In the first phase 2. . . study, alagebrium improved arterial compliance in elderly patients with vascular stiffening. subsequent phase 2 clin. studies, one addressing diastolic heart failure and the other addressing systolic hypertension , alagebrium was effective in improving cardiac function and uncontrolled systolic blood pressure, particularly in more severely affected patients. Addnl. clin. studies to determine the utility of alagebrium in treating cardiovascular disorders associated. IT

Glycoproteins

RL: ADV (Adverse effect, including toxicity); BSU (Biological study, unclassified); BIOL (Biological study)

(AGE (advanced glycosylation end product); phase 2 clin. study of alagebrium which break AGE cross-link between protein was effective, well tolerated in improving cardiac function by controlling systolic blood pressure, vascular

stiffening, hypertension in elderly patient)

IT Blood pressure

Blood vessel, disease Cardiovascular system, disease Human

Hypertension

```
(phase 2 clin. study of alagebrium which break AGE cross-link between
        protein was effective, well tolerated in improving cardiac function by
        controlling systolic blood pressure,
        vascular stiffening, hypertension in elderly patient)
TI.
     Diabetes mellitus
        (phase 2 clin. study of alagebrium which break AGE cross-link formed in
        diabetes patient was effective, well tolerated in improving cardiac
        function by controlling systolic blood
       pressure, vascular stiffening, hypertension)
ΙT
     28589-79-9, Thiazolium
     RL: BSU (Biological study, unclassified); PAC (Pharmacological activity);
     THU (Therapeutic use); BIOL (Biological study); USES (Uses)
        (alagebrium class of thiazolium break AGE cross-link between protein
       was effective, well tolerated in improving cardiac function by
        controlling systolic blood pressure,
        vascular stiffening, hypertension in elderly patient)
IT
     341028-37-3, ALT-711
     RL: BSU (Biological study, unclassified); PAC (Pharmacological activity);
     THU (Therapeutic use); BIOL (Biological study); USES (Uses)
        (phase 2 clin. study of ALT-711 which break AGE cross-link between
       protein was effective, well tolerated in improving cardiac function by
       controlling systolic blood pressure,
       vascular stiffening, hypertension in elderly patient)
TΤ
     341028-37-3, ALT-711
     RL: BSU (Biological study, unclassified); PAC (Pharmacological activity);
    THU (Therapeutic use); BIOL (Biological study); USES (Uses)
        (phase 2 clin. study of ALT-711 which break AGE cross-link between
       protein was effective, well tolerated in improving cardiac function by
       controlling systolic blood pressure,
       vascular stiffening, hypertension in elderly patient)
RN
     341028-37-3 HCAPLUS
CN
    Thiazolium, 4,5-dimethyl-3-(2-oxo-2-phenylethyl)-, chloride (9CI) (CA
     INDEX NAME)
```

• c1-

L6 ANSWER 3 OF 18 HCAPLUS COPYRIGHT 2005 ACS on STN GI

The authors prepared thiazine compds. I [R = H, Me, HOCH2, MeCHOH; R1, R2 = H, C1-C6 alkyl, C1-C6 hydroxyalkyl, C3-C8 cycloalkyl, C1-C6 alkenyl, C1-C6 alkynyl, amino, monoalkylamino, dialkylaminoalkyl, pyrrolidin-1-ylalkyl; Y = C1-C6 alkyl, substituted and unsubstituted aryl; with the provisos that:

(a) if Y = aryl, then at least one of R1 and R2 is other than H, and (b) if R2 = H, R1 = not Me] (and pharmaceutically acceptable salts thereof). For example, 4,5-dimethyl-3-(2-oxo-2-phenylethyl)thiazolium chloride was reacted with NaOH to give I (R = H, R1 = R2 = Me, Y = Ph). The compds. are useful, among other things, as prodrugs which can be converted under acidic conditions to thiazolium agents. The compds. can be administered to mammals, including humans, for treatment of various indications including hypertension, reduced vascular compliance, diastolic dysfunction, heart failure, and isolated

systolic hypertension.
2004:927187 Document Number 141:395566 Preparaton of dihydrothiazine prodrugs
of thiazolium agents. Reinhard, Emily; Katten, Elliot (Alteon, Inc.,
USA). PCT Int. Appl. WO 2004094396 A2 20041104, 40 pp. DESIGNATED
STATES: W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA,
CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE,
GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS,
LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH,
PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA,
UG, UZ, VC, VN, YU, ZA, ZM, ZW; RW: AT, BE, BF, BJ, CF, CG, CH, CI, CM,

CY, DE, DK, ES, FI, FR, GA, GB, GR, IE, IT, LU, MC, ML, MR, NE, NL, PT, SE, SN, TD, TG, TR. (English). CODEN: PIXXD2. APPLICATION: WO

2004-US11984 20040416. PRIORITY: US 2003-PV463807 20030418; US 2004-824848 20040415.

AB . . . acidic conditions to thiazolium agents. The compds. can be administered to mammals, including humans, for treatment of various indications including hypertension, reduced vascular compliance, diastolic dysfunction, heart failure, and isolated systolic hypertension.

ST thiazine prepn prodrug thiazolium salt hypertension heart failure; vascular compliance reduced thiazine prodrug thiazolium salt

IT Blood pressure

(diastolic; preparation of dihydrothiazine prodrugs of thiazolium agents and their pharmaceutical use for hypertension, diastolic dysfunction, heart failure, and reduced vascular compliance)

IT Heart, disease

(failure; preparation of dihydrothiazine prodrugs of thiazolium agents and their pharmaceutical use for **hypertension**, **diastolic** dysfunction, heart failure, and reduced vascular compliance)

IT Hypertension

(preparation of dihydrothiazine prodrugs of thiazolium agents and their pharmaceutical use for hypertension, diastolic dysfunction, heart failure, and reduced vascular compliance)

```
ΙT
     Drug delivery systems
         (prodrugs; preparation of dihydrothiazine prodrugs of thiazolium agents and
        their pharmaceutical use for hypertension, diastolic
        dysfunction, heart failure, and reduced vascular compliance)
TΤ
     Blood pressure
         (systolic; preparation of dihydrothiazine prodrugs of thiazolium
        agents and their pharmaceutical use for hypertension,
        systolic hypertension, diastolic
        dysfunction, heart failure, and reduced vascular compliance)
ΙT
     Blood vessel, disease
         (vascular compliance; preparation of dihydrothiazine prodrugs of thiazolium
        agents and their pharmaceutical use for hypertension,
        diastolic dysfunction, heart failure, and reduced vascular
        compliance)
IT
     787621-17-4P
     RL: PAC (Pharmacological activity); RCT (Reactant); SPN (Synthetic
     preparation); THU (Therapeutic use); BIOL (Biological study); PREP
     (Preparation); RACT (Reactant or reagent); USES (Uses)
         (preparation of dihydrothiazine prodrugs of thiazolium agents and their
        pharmaceutical use for hypertension, diastolic
        dysfunction, heart failure, and reduced vascular compliance)
     787621-19-6P
IT
     RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU
     (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES
     (Uses)
        (preparation of dihydrothiazine prodrugs of thiazolium agents and their
        pharmaceutical use for hypertension, diastolic
        dysfunction, heart failure, and reduced vascular compliance)
IT
     341028-37-3
                  787621-18-5
     RL: RCT (Reactant); RACT (Reactant or reagent)
         (preparation of dihydrothiazine prodrugs of thiazolium agents and their
        pharmaceutical use for hypertension, diastolic
        dysfunction, heart failure, and reduced vascular compliance)
· IT
     356758-28-6P
     RL: SPN (Synthetic preparation); PREP (Preparation)
         (preparation of dihydrothiazine prodrugs of thiazolium agents and their
        pharmaceutical use for hypertension, diastolic
        dysfunction, heart failure, and reduced vascular compliance)
TΤ
     341028-37-3
     RL: RCT (Reactant); RACT (Reactant or reagent)
        (preparation of dihydrothiazine prodrugs of thiazolium agents and their
        pharmaceutical use for hypertension, diastolic
        dysfunction, heart failure, and reduced vascular compliance)
RN
     341028-37-3 HCAPLUS
CN
     Thiazolium, 4,5-dimethyl-3-(2-oxo-2-phenylethyl)-, chloride (9CI) (CA
```

INDEX NAME)

● c1-

L6 ANSWER 4 OF 18 HCAPLUS COPYRIGHT 2005 ACS on STN

Background: Increased formation of advanced glycosylation end-products on AB body proteins is a consequence of aging and leads to exaggerated collagen crosslinking eventually increasing cardiovascular stiffness. This study reports our initial inquires into the cardiovascular and renal effects of a cross-link breaker (ALT-711) in aged spontaneously hypertensive rats (SHR). Methods and results: The first experiment, in 45-wk-old SHR, showed that (among four doses) the dose of 1 mg/kg/d of ALT-711 given for 4 mo was most effective in reducing left ventricular and aortic mass indexes. ALT-711 also reduced left ventricular hydroxyproline concentration  $(5.8\pm0.2 \text{ v } 5.1\pm0.3 \text{ mg/g in controls, } P < .05)$ ; however, it did not affect systemic or regional hemodynamics. In older SHR, ALT-711 (1 mg/kg/d) reduced (P <.05) systolic pressure (tail-cuff) (from 203±3 mm Hg at outset to 187±3 mm Hg at 8 wk). Systolic pressure remained unchanged in placebo-treated rats. In addition, left ventricular index  $(3.09\pm0.10 \text{ v } 3.44\pm0.05 \text{ mg/g})$  and aortic mass index  $(1.54\pm0.04 \text{ v } 1.74\pm0.05 \text{ mg/mm})$  were reduced by ALT-711. In the third experiment, 1-yr-old SHR were given vehicle or ALT-711 (1 mg/kg/d) or placebo until natural death. After 3 mo, ALT-711 markedly reduced urinary protein excretion  $(74.5\pm8.6 \text{ v } 135.4\pm11.8 \text{ mg}/24 \text{ h})$ . Echocardiog. studies, performed at the outset and after 3 and 6 mo, revealed two changed indexes. Left ventricular end-diastolic diameter increased more in control than in ALT rats, whereas E-wave deceleration time decreased more in control than in ALT rats. Conclusions: Therapy with ALT-711 exerted beneficial cardiovascular and renal effects in aged SHR, improving systolic pressure, left ventricular mass, geometry, and hydroxyproline content while reducing urinary protein excretion.

2004:281528 Document Number 141:360381 Cardiovascular and renal effects of a collagen cross-link breaker (ALT 711) in adult and aged spontaneously hypertensive rats. Susic, Dinko; Varagic, Jasmina; Frohlich, Edward D. (Hypertension Research Laboratory, Ochsner Clinic Foundation, New Orleans, LA, USA). American Journal of Hypertension, 17(4), 328-333 (English) 2004. CODEN: AJHYE6. ISSN: 0895-7061. Publisher: Elsevier Science Inc..

TI Cardiovascular and renal effects of a collagen cross-link breaker (ALT 711) in adult and aged spontaneously hypertensive rats

AB . . . This study reports our initial inquires into the cardiovascular and renal effects of a cross-link breaker (ALT-711) in aged spontaneously hypertensive rats (SHR). Methods and results: The first experiment, in 45-wk-old SHR, showed that (among four doses) the dose of 1. . . P <.05); however, it did not affect systemic or regional hemodynamics. In

older SHR, ALT-711 (1 mg/kg/d) reduced (P <.05) systolic pressure (tail-cuff) (from 203±3 mm Hg at outset to 187±3 mm Hg at 8 wk). Systolic pressure remained unchanged in placebo-treated rats. In addition, left ventricular index (3.09±0.10 v 3.44±0.05 mg/g) and aortic mass index (1.54±0.04. . . mg/24 h). Echocardiog. studies, performed at the outset and after 3 and 6 mo, revealed two changed indexes. Left ventricular end-diastolic diameter increased more in control than in ALT rats, whereas E-wave deceleration time decreased more in control than in ALT rats. Conclusions: Therapy with ALT-711 exerted beneficial cardiovascular and renal effects in aged SHR, improving systolic pressure, left ventricular mass, geometry, and hydroxyproline content while reducing urinary protein excretion. collagen cross link breaker cardiovascular renal system hemodynamics

hypertension

ST

IT Glycoproteins

RL: ADV (Adverse effect, including toxicity); BSU (Biological study, unclassified); BIOL (Biological study)

(AGE (advanced glycosylation end product); collagen cross-linker ALT 711 effectively reduced left ventricular and aortic indexes, left ventricular hydroxy proline content, systolic pressure, proteinuria, left ventricular diastolic diameter, E-wave deceleration in aged SHR)

IT Artery, disease

(aorta, stiffness; collagen cross-linker ALT 711 effectively reduced left ventricular and aortic indexes, left ventricular hydroxy proline content, systolic pressure, proteinuria, left ventricular diastolic diameter, E-wave deceleration in aged SHR)

IT Artery

(aorta; collagen cross-linker ALT 711 effectively reduced left ventricular and aortic indexes, left ventricular hydroxy proline content, systolic pressure, proteinuria, left ventricular diastolic diameter, E-wave deceleration in aged SHR)

IT Cardiovascular system

Circulation

(collagen cross-linker ALT 711 effectively reduced left ventricular and aortic indexes, left ventricular hydroxy proline content, systolic pressure, left ventricular diastolic diameter, E-wave deceleration in aged SHR)

IT Aging, animal

Cardiovascular agents

Heart

(collagen cross-linker ALT 711 effectively reduced left ventricular and aortic indexes, left ventricular hydroxy proline content, systolic pressure, proteinuria, left ventricular diastolic diameter, E-wave deceleration in aged SHR)

IT Collagens, biological studies

RL: ADV (Adverse effect, including toxicity); BSU (Biological study, unclassified); BIOL (Biological study)

(crosslinked; collagen cross-linker ALT 711 effectively reduced left ventricular and aortic indexes, left ventricular hydroxy proline content, systolic pressure, proteinuria, left ventricular diastolic diameter, E-wave deceleration in aged SHR)

IT Heart

(left ventricle; collagen cross-linker ALT 711 effectively reduced left ventricular and aortic indexes, left ventricular hydroxy proline content, systolic pressure, proteinuria, left ventricular diastolic diameter, E-wave deceleration in aged SHR)

IT Proteins

RL: BSU (Biological study, unclassified); BIOL (Biological study) (proteinuria; collagen cross-linker ALT 711 effectively reduced left ventricular and aortic indexes, left ventricular hydroxy proline content, systolic pressure, proteinuria, left ventricular diastolic diameter, E-wave deceleration in aged SHR)

IT Hypertension

(spontaneous; collagen cross-linker ALT 711 effectively reduced left ventricular and aortic indexes, left ventricular hydroxy proline content, systolic pressure, proteinuria, left ventricular diastolic diameter, E-wave deceleration in aged SHR)

IT Heart

(toxicity; collagen cross-linker ALT 711 effectively reduced left ventricular and aortic indexes, left ventricular hydroxy proline content, systolic pressure, proteinuria, left ventricular diastolic diameter, E-wave deceleration in aged SHR)

IT 51-35-4, Hydroxyproline

RL: BSU (Biological study, unclassified); BIOL (Biological study) (collagen cross-linker ALT 711 effectively reduced left ventricular and aortic indexes, left ventricular hydroxy proline content, systolic pressure, proteinuria, left ventricular diastolic diameter, E-wave deceleration in aged SHR)

IT 181069-80-7, ALT 711

RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(collagen cross-linker ALT 711 effectively reduced left ventricular and aortic indexes, left ventricular hydroxy proline content, systolic pressure, proteinuria, left ventricular

diastolic diameter, E-wave deceleration in aged SHR)

IT 181069-80-7, ALT 711

RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(collagen cross-linker ALT 711 effectively reduced left ventricular and aortic indexes, left ventricular hydroxy proline content, systolic pressure, proteinuria, left ventricular

diastolic diameter, E-wave deceleration in aged SHR)

RN 181069-80-7 HCAPLUS

CN Thiazolium, 4,5-dimethyl-3-(2-oxo-2-phenylethyl)-, bromide (9CI) (CA INDEX NAME)

● Br-

- L6 ANSWER 5 OF 18 HCAPLUS COPYRIGHT 2005 ACS on STN
- Aging and diabetes mellitus (DM) both affect the structure and function of AΒ the myocardium, resulting in increased collagen in the heart and reduced cardiac function. As part of this process, hyperglycemia is a stimulus for the production of advanced glycation end products (AGEs), which covalently modify proteins and impair cell function. The goals of this study were first to examine the combined effects of aging and DM on hemodynamics and collagen types in the myocardium in 12 dogs, 9-12 yr old, and second to examine the effects of the AGE crosslink breaker phenyl-4,5dimethylthazolium chloride (ALT-711) on myocardial collagen protein content, aortic stiffness, and left ventricular (LV) function in the aged diabetic heart. The alloxan model of DM was utilized to study the effects of DM on the aging heart. DM induced in the aging heart decreased LV systolic function (LV ejection fraction fell by 25%), increased aortic stiffness, and increased collagen type I and type III protein content. ALT-711 restored LV ejection fraction, reduced aortic stiffness and LV mass with no reduction in blood glucose level (199±17 mg/dL), and reversed the upregulation of collagen type I and type III. Myocardial LV collagen solubility (%) increased significantly after treatment with ALT-711. These data suggest that an AGE crosslink breaker may have a therapeutic role in aged patients with DM.
- 2004:1425 Document Number 140:91894 Glycation end-product cross-link breaker
   reduces collagen and improves cardiac function in aging diabetic heart.
   Liu, Jing; Masurekar, Malthi R.; Vatner, Dorothy E.; Jyothirmayi,
   Garikiparthy N.; Regan, Timothy J.; Vatner, Stephen F.; Meggs, Leonard G.;
   Malhotra, Ashwani (Department of Cell Biology and Molecular Medicine,
   University of Medicine and Dentistry of New Jersey-New Jersey Medical
   School, Newark, NJ, 07101, USA). American Journal of Physiology, 285(6,
   Pt. 2), H2587-H2591 (English) 2003. CODEN: AJPHAP. ISSN: 0002-9513.
   Publisher: American Physiological Society.
- AB . . . was utilized to study the effects of DM on the aging heart. DM induced in the aging heart decreased LV systolic function (LV ejection fraction fell by 25%), increased aortic stiffness, and increased collagen type I and type III protein content. . .
- IT **341028-37-3**, ALT-711
  - RL: DMA (Drug mechanism of action); PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
    - (glycation end-product crosslink breaker reduces collagen and improves cardiac function in aging diabetic heart)
- IT **341028-37-3**, ALT-711
  - RL: DMA (Drug mechanism of action); PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
    - (glycation end-product crosslink breaker reduces collagen and improves cardiac function in aging diabetic heart)
- RN 341028-37-3 HCAPLUS
- CN Thiazolium, 4,5-dimethyl-3-(2-oxo-2-phenylethyl)-, chloride (9CI) (CA INDEX NAME)

● cl-

L6 ANSWER 6 OF 18 HCAPLUS COPYRIGHT 2005 ACS on STN

AB A review. Long-lived structural proteins, collagen and elastin, undergo continual non-enzymic crosslinking during aging and in diabetic individuals. This abnormal protein crosslinking is mediated by advanced glycation end products (AGEs) generated by non-enzymic glycosylation of proteins by glucose. The AGE-derived protein crosslinking of structural proteins contributes to the complications of long-term diabetes such as nephropathy, retinopathy, and neuropathy. AGE-crosslinks have also been implicated in age-related cardiovascular diseases. Potential treatment strategies for these AGE-derived complications include prevention of AGE-formation and breaking of the existing AGE-crosslinks. therapeutic potential of the AGE-inhibitor, pimagedine (aminoguanidine), has been extensively investigated in animal models and in Phase 3 clin. trials. This review presents the pre-clin. and clin. studies using ALT-711, a highly potent AGE-crosslink breaker that has the ability to reverse already-formed AGE-crosslinks. Oral administration of ALT-711 has resulted in a rapid improvement in the elasticity of stiffened myocardium in exptl. animals. Topical administration of ALT-711 was effective in improving the skin hydration of aged rats. The therapeutic potential of crosslink breakers for cardiovascular complications and dermatol. alterations associated with aging and diabetes is discussed.

2003:804088 Document Number 140:121913 Therapeutic potential of breakers of advanced glycation end product-protein crosslinks. Vasan, Sara; Foiles, Peter; Founds, Hank (Alteon Inc., Ramsey, NJ, 07446, USA). Archives of Biochemistry and Biophysics, 419(1), 89-96 (English) 2003. CODEN: ABBIA4. ISSN: 0003-9861. Publisher: Elsevier Science.

IT Aging, animal

### Antihypertensives

Diabetes mellitus

Human

#### Hypertension

(therapeutic potential of AGE crosslink breakers)

IT **341028-37-3**, ALT 711

RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(ALT 711; therapeutic potential of AGE crosslink breakers)

IT **341028-37-3**, ALT 711

RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(ALT 711; therapeutic potential of AGE crosslink breakers)

RN 341028-37-3 HCAPLUS

CN Thiazolium, 4,5-dimethyl-3-(2-oxo-2-phenylethyl)-, chloride (9CI) (CA INDEX NAME)

• c1-

L6 ANSWER 7 OF 18 HCAPLUS COPYRIGHT 2005 ACS on STN

AB Renal accumulation of advanced glycation end products (AGEs) has been linked to the progression of diabetic nephropathy. Cleavage of pre-formed AGEs within the kidney by a cross-link breaker, such as ALT-711, may confer renoprotection in diabetes. STZ diabetic rats were randomized into (a) no treatment (D); (b) treatment with the AGE cross-link breaker, ALT-711, weeks 16-32 (DALT early); and (c) ALT-711, weeks 24-32 (DALT late). Treatment with ALT-711 resulted in a significant reduction in diabetes-induced serum and renal AGE peptide fluorescence, associated with decreases in renal carboxymethyllysine and RAGE immunostaining. Crosslinking of tail tendon collagen seen in diabetic groups was attenuated only by 16 wk of ALT-711 treatment. ALT-711, independent of treatment duration, retarded albumin excretion rate (AER), reduced blood pressure, and renal hypertrophy. It also reduced diabetes-induced increases in gene expression of transforming growth factor  $\beta$ 1 (TGF- $\beta$ 1), connective tissue growth factor (CTGF), and collagen IV. However, glomerulosclerotic index, tubulointerstitial area, total renal collagen, nitrotyrosine, protein expression of collagen IV, and TGF- $\beta$ 1 only showed improvement with early ALT treatment alone. This study demonstrates the utility of a cross-link breaker as a treatment for diabetic nephropathy and describes effects not only on renal AGEs but on putative mediators of renal injury, such as prosclerotic cytokines and oxidative stress.

2003:730751 Document Number 139:301751 The breakdown of pre-existing advanced glycation end products is associated with reduced renal fibrosis in experimental diabetes. Forbes, Josephine M.; Thallas, Vicki; Thomas, Merlin C.; Founds, Hank W.; Burns, Wendy C.; Jerums, George; Cooper, Mark E. (Division of Diabetic Complications, Baker Medical Research Institute, Melbourne, 8008, Australia). FASEB Journal, 17(12), 1762-1764, 10.1096/fj.02-1102fje (English) 2003. CODEN: FAJOEC. ISSN: 0892-6638. Publisher: Federation of American Societies for Experimental Biology.

AB . . . was attenuated only by 16 wk of ALT-711 treatment. ALT-711, independent of treatment duration, retarded albumin excretion rate (AER), reduced **blood pressure**, and renal hypertrophy. It also reduced diabetes-induced increases in gene expression of transforming growth factor  $\beta$ 1 (TGF- $\beta$ 1), connective tissue growth. . .

IT Hypertension

Hypertrophy

(renal, reduction by cross-link breaker ALT-711; breakdown of pre-existing advanced glycation end products is associated with reduced renal fibrosis in exptl. diabetes)

IT **341028-37-3**, ALT 711

RL: DMA (Drug mechanism of action); PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(ALT 711; breakdown of pre-existing advanced glycation end products is associated with reduced renal fibrosis in exptl. diabetes)

IT 341028-37-3, ALT 711

RL: DMA (Drug mechanism of action); PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(ALT 711; breakdown of pre-existing advanced glycation end products is associated with reduced renal fibrosis in exptl. diabetes)

RN 341028-37-3 HCAPLUS

CN Thiazolium, 4,5-dimethyl-3-(2-oxo-2-phenylethyl)-, chloride (9CI) (CA INDEX NAME)

● c1-

L6 ANSWER 8 OF 18 HCAPLUS COPYRIGHT 2005 ACS on STN

AB The invention provides a method of treating, ameliorating, or preventing certain fibrotic diseases or other indications in an animal, including a human, comprising administering an effective amount of a heterocyclic compound The effect of 3-(2-phenyl-2-oxoethyl)-4,5-dimethylthiazolium salt in a rat heart infarction model is presented.

IT Alzheimer's disease
 Anti-Alzheimer's agents

Antiarteriosclerotics Antiarthritics Antiasthmatics Antidiabetic agents

# Antihypertensives

Antitumor agents
Arteriosclerosis
Asthma
Atherosclerosis
Cardiovascular agents
Cataract
Diabetes mellitus
Dialysis
Fibrosis

### Hypertension

Nervous system agents Osteoarthritis Periodontium, disease Rheumatoid arthritis Sickle cell anemia

(heterocyclic compds. for treatment of fibrotic diseases or other conditions)

# IT Blood pressure

(systolic, systolic hypertension;

heterocyclic compds. for treatment of fibrotic diseases or other conditions)

IT 393121-34-1

Human

RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(heterocyclic compds for treatment of fibratic diseases or o

(heterocyclic compds. for treatment of fibrotic diseases or other conditions)

IT 393121-34-1

RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(heterocyclic compds. for treatment of fibrotic diseases or other conditions)

RN 393121-34-1 HCAPLUS

CN Thiazolium, 4,5-dimethyl-3-(2-oxo-2-phenylethyl)- (9CI) (CA INDEX NAME)

L6 ANSWER 9 OF 18 HCAPLUS COPYRIGHT 2005 ACS on STN

AB Arterial stiffening with increased pulse pressure is a leading risk factor for cardiovascular disease in the elderly. We tested whether ALT-711, a novel nonenzymic breaker of advanced glycation end-product crosslinks,

selectively improves arterial compliance and lowers pulse pressure in older individuals with vascular stiffening. Nine US centers recruited and randomly assigned subjects with resting arterial pulse pressures >60 mm Hg and systolic pressures >140 mm Hg to once-daily ALT-711 (210 mg; n=62) or placebo (n=31) for 56 days. Preexisting antihypertensive treatment (90% of subjects) was continued during the study. Morning upright blood pressure, stroke volume, cardiac output, systemic vascular resistance, total arterial compliance, carotid-femoral pulse wave velocity, and drug tolerability were assessed. ALT-711 netted a greater decline in pulse pressures than placebo (-5.3 vs. -0.6 mm Hg at day 56; P=0.034 for treatment effect by repeated-measures ANOVA). Systolic pressure declined in both groups, but diastolic pressure fell less with ALT-711 (P=0:056). Mean pressure declined similarly in both groups (-4 mm Hg; P<0.01 for each group, P=0.34 for treatment effect). Total arterial compliance rose 15% in ALT-711-treated subjects vs. no change with placebo (P=0.015 vs. ALT-711), an effect that did not depend on reduced mean pressure. wave velocity declined 8% with ALT-711 (P<0.05 at day 56, P=0.08 for treatment effect). Systemic arterial resistance, cardiac output, and heart rate did not significantly change in either group. ALT-711 improves total arterial compliance in aged humans with vascular stiffening, and it may provide a novel therapeutic approach for this abnormality, which occurs with aging, diabetes, and isolated systolic

hypertension.

- 2001:783968 Document Number 136:112431 Improved arterial compliance by a novel advanced glycation end-product crosslink breaker. Kass, David A.; Shapiro, Edward P.; Kawaguchi, Miho; Capriotti, Anne R.; Scuteri, Angelo; deGroof, Robert C.; Lakatta, Edward G. (Division of Cardiology, The Johns Hopkins Medical Institutions, Baltimore, MD, 21287, USA). Circulation, 104(13), 1464-1470 (English) 2001. CODEN: CIRCAZ. ISSN: 0009-7322. Publisher: Lippincott Williams & Wilkins.
- AB · · · with vascular stiffening. Nine US centers recruited and randomly assigned subjects with resting arterial pulse pressures >60 mm Hg and systolic pressures >140 mm Hg to once-daily ALT-711 (210 mg; n=62) or placebo (n=31) for 56 days. Preexisting antihypertensive treatment (90% of subjects) was continued during the study. Morning upright blood pressure, stroke volume, cardiac output, systemic vascular resistance, total arterial compliance, carotid-femoral pulse wave velocity, and drug tolerability were assessed. ALT-711 netted a greater decline in pulse pressures than placebo (-5.3 vs. -0.6 mm Hg at day 56; P=0.034 for treatment effect by repeated-measures ANOVA). Systolic pressure declined in both groups, but diastolic pressure fell less with ALT-711 (P=0:056). Mean pressure declined similarly in both groups (-4 mm Hg; P<0.01 for each group, . . . vascular stiffening, and it may provide a novel therapeutic approach for this abnormality, which occurs with aging, diabetes, and isolated systolic hypertension.

### IT 181069-80-7

RL: ADV (Adverse effect, including toxicity); PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses) (ALT 711; improved arterial compliance by a novel advanced glycation end-product crosslink breaker)

## IT 181069-80-7

RL: ADV (Adverse effect, including toxicity); PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses) (ALT 711; improved arterial compliance by a novel advanced glycation end-product crosslink breaker)

RN 181069-80-7 HCAPLUS
CN Thiazolium, 4,5-dimethyl-3-(2-oxo-2-phenylethyl)-, bromide (9CI) (CAINDEX NAME)

● Br-

L6 ANSWER 10 OF 18 HCAPLUS COPYRIGHT 2005 ACS on STN

AB A method and compns. are disclosed for improving the elasticity or reducing wrinkles of the skin, treating disorders such as diabetes or treating or preventing adverse sequelae of diabetes, kidney damage, damage to blood vasculature, hypertension, retinopathy, damage to lens proteins, cataracts, peripheral neuropathy, or osteoarthritis. Thus, 3-(2-phenyl-2-hydroxyethyl)-4,5-dimethylthiazolium chloride (I)was prepared by the reduction of 2-chloroacetophenone followed by the reaction of the resulting alc. with 4,5-dimethylthiazole. Tablets contained I 50, starch 50, mannitol 75, mg stearate 2, and stearic acid 2 mg/tablet.

2001:635892 Document Number 135:200476 Thiazolium compounds and treatments of disorders associated with skin aging. Wagle, Dilip; Vasan, Sarah; Egan, Jack (Alteon, Inc., USA). PCT Int. Appl. WO 2001062250 A1 20010830, 32 pp. DESIGNATED STATES: W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM; RW: AT, BE, BF, BJ, CF, CG, CH, CI, CM, CY, DE, DK, ES, FI, FR, GA, GB, GR, IE, IT, LU, MC, ML, MR, NE, NL, PT, SE, SN, TD, TG, TR. (English). CODEN: PIXXD2. APPLICATION: WO 2001-US5868 20010223. PRIORITY: US 2000-PV184266 20000223.

AB . . . skin, treating disorders such as diabetes or treating or preventing adverse sequelae of diabetes, kidney damage, damage to blood vasculature, hypertension, retinopathy, damage to lens proteins, cataracts, peripheral neuropathy, or osteoarthritis. Thus, 3-(2-phenyl-2-hydroxyethyl)-4,5-dimethylthiazolium chloride (I)was prepared by the reduction of 2-chloroacetophenone. . .

IT Antiarthritics

Antidiabetic agents

Antihypertensives Blood vessel, disease Dentifrices

Mouthwashes Skin, disease

(thiazolium compds. for treatments of disorders associated with skin

aging) IT 356759-42-7P 356759-43-8P 356759-44-9P 356759-45-0P 356759-46-1P 356759-47-2P. 356759-48-3P 356759-50-7P 356759-52-9P 356759-53-0P 356759-54-1P RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses) (thiazolium compds. for treatments of disorders associated with skin aging) ΙT 356759-42-7P 356759-43-8P 356759-44-9P 356759-45-0P 356759-46-1P 356759-47-2P 356759-50-7P 356759-52-9P 356759-53-0P RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses) (thiazolium compds. for treatments of disorders associated with skin aging) RN 356759-42-7 HCAPLUS Thiazolium, 3-(2-hydroxy-2-phenylethyl)-4,5-dimethyl-, chloride (9CI) (CA CN INDEX NAME)

### ● C1 -

RN 356759-43-8 HCAPLUS
CN Thiazolium, 3-[(2S)-2-hydroxy-2-phenylethyl]-4,5-dimethyl-, chloride (9CI)
(CA INDEX NAME)

Absolute stereochemistry. Rotation (-).

● c1-

RN 356759-44-9 HCAPLUS
CN Thiazolium, 3-[(2R)-2-hydroxy-2-phenylethyl]-4,5-dimethyl-, chloride (9CI)
(CA INDEX NAME)

Absolute stereochemistry. Rotation (+).

● cl-

RN 356759-45-0 HCAPLUS
CN Thiazolium, 3-[2-(4-hydroxyphenyl)-2-oxoethyl]-4,5-dimethyl-, bromide (9CI) (CA INDEX NAME)

● Br

RN 356759-46-1 HCAPLUS
CN Thiazolium, 3-[2-(2-hydroxyphenyl)-2-oxoethyl]-4,5-dimethyl-, bromide (9CI) (CA INDEX NAME)

● Br-

RN 356759-47-2 HCAPLUS
CN Thiazolium, 3-[2-(3-hydroxyphenyl)-2-oxoethyl]-4,5-dimethyl-, bromide (9CI) (CA INDEX NAME)

09/905,188

● Br-

RN 356759-50-7 HCAPLUS
CN Thiazolium, 3-[2-(2,4-dihydroxyphenyl)-2-oxoethyl]-4,5-dimethyl-, bromide (9CI) (CA INDEX NAME)

● Br-

RN 356759-52-9 HCAPLUS
CN Thiazolium, 3-[2-(3,5-dihydroxyphenyl)-2-oxoethyl]-4,5-dimethyl-, bromide (9CI) (CA INDEX NAME)

• Br-

RN 356759-53-0 HCAPLUS
CN Thiazolium, 3-[2-(2,5-dihydroxyphenyl)-2-oxoethyl]-4,5-dimethyl-, bromide (9CI) (CA INDEX NAME)

● Br-

RN 356759-54-1 HCAPLUS
CN Thiazolium, 3-[2-(3,4-dihydroxyphenyl)-2-oxoethyl]-4,5-dimethyl-, bromide (9CI) (CA INDEX NAME)

● Br-

L6 ANSWER 11 OF 18 HCAPLUS COPYRIGHT 2005 ACS on STN

AB A review with 6 refs. Vascular and/or myocardial stiffness is a major problem in ageing, diabetes, hypertension and heart failure. The development of the stiffness is partly due to the formation of glucose-dependent cross-links in the collagen. ALT-711 cleaves these cross-links. In aged-rhesus monkeys, ALT-711 decreases vascular stiffness and this effect is reversible. ALT-711 also decreases myocardial stiffness in the monkeys but this effect is not reversible in 39 wk. ALT-711 has potential in the treatment of the stiffness associated with diabetes, hypertension and heart failure.

2001:321927 Document Number 135:131603 ALT-711 decreases cardiovascular stiffness and has potential in diabetes, hypertension and heart failure. Doggrell, Sheila A. (Doggrell Biomedical Communications, Auckland, N. Z.). Expert Opinion on Investigational Drugs, 10(5), 981-983 (English) 2001. CODEN: EOIDER. ISSN: 1354-3784. Publisher: Ashley Publications Ltd..

TI ALT-711 decreases cardiovascular stiffness and has potential in diabetes, hypertension and heart failure

AB A review with 6 refs. Vascular and/or myocardial stiffness is a major problem in ageing, diabetes, hypertension and heart failure. The development of the stiffness is partly due to the formation of glucose-dependent cross-links in the collagen.... this effect is not reversible in 39 wk. ALT-711 has potential in the treatment of the stiffness associated with diabetes, hypertension and heart failure.

ST review cardiovascular stiffness ALT711 diabetes hypertension; heart failure arterial stiffness ALT711 review

IT Aging, animal
 Diabetes mellitus

### Hypertension

(ALT-711 decreases cardiovascular stiffness and has potential in diabetes, hypertension and heart failure)

IT Heart, disease

(failure; ALT-711 decreases cardiovascular stiffness and has potential in diabetes, hypertension and heart failure)

IT Artery, disease

(stiffness; ALT-711 decreases cardiovascular stiffness and has potential in diabetes, hypertension and heart failure)

IT **341028-37-3**, ALT 711

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(ALT-711 decreases cardiovascular stiffness and has potential in diabetes, hypertension and heart failure)

IT 341028-37-3, ALT 711

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(ALT-711 decreases cardiovascular stiffness and has potential in diabetes, hypertension and heart failure)

RN 341028-37-3 HCAPLUS

CN Thiazolium, 4,5-dimethyl-3-(2-oxo-2-phenylethyl)-, chloride (9CI) (CA INDEX NAME)

• c1-

ANSWER 12 OF 18 HCAPLUS COPYRIGHT 2005 ACS on STN

AB Nonenzymic glycosylation and crosslinking of proteins by glucose contributes to an age-associated increase in vascular and myocardial stiffness. Some recently synthesized this zolium compds, selectively

stiffness. Some recently synthesized thiazolium compds. selectively break these protein cross-links, reducing collagen stiffness. We investigated the effects of 3-phenacyl-4,5-dimethylthiazolium chloride (ALT-711) on arterial and left ventricular (LV) properties and their coupling in old, healthy, nondiabetic Macaca mulatta primates (age 21±3.6 yr). Serial measurements of arterial stiffness indexes [i.e., aortic pulse wave velocity (PWV) and augmentation (AGI) of carotid arterial pressure waveform] as well as echocardiog. detns. of LV structure and function were made before and for 39 wk after 11 i.m. injections of ALT-711 at 1.0 mg/kgbody weight every other day. Heart rate, brachial blood pressure, and body weight were unchanged by the drug. PWV and AGI decreased to a nadir at 6 wk [PWV to  $74.2\pm4.4\%$  of baseline (B), P = 0.007; AGI to  $41\pm7.3\%$  of B, P = 0.046], and thereafter gradually returned to baseline. Concomitant increases in LV end **diastolic** diameter to  $116.7\pm2.7\%$  of B, P = 0.02; stroke volume index (SVindex) to  $173.1\pm40.1\%$  of B, P = 0.01; and systolic fractional shortening to  $180\pm29.7\%$  of B, P = 0.01 occurred after drug treatment The LV end systolic pressure/SVindex, an estimate of total LV

vascular load, decreased to  $60\pm12.1\%$  of B (P = 0.02). The LV end **systolic** diameter/SVindex, an estimate of arterio-ventricular coupling, was improved (decreased to  $54.3\pm11\%$  of B, P < 0.002). Thus, in healthy older primates without diabetes, ALT-711 improved both arterial and ventricular function and optimized ventriculo-vascular coupling. This previously unidentified cross-link breaker may be an effective pharmacol. therapy to improve impaired cardiovascular function that occurs in the context of heart failure associated with aging, diabetes, or **hypertension**, conditions in which arterial and ventricular stiffness are increased.

- 2001:120548 Document Number 134:290192 A cross-link breaker has sustained effects on arterial and ventricular properties in older rhesus monkeys. Vaitkevicius, Peter V.; Lane, Mark; Spurgeon, Harold; Ingram, Donald K.; Roth, George S.; Egan, John J.; Vasan, Sara; Wagle, Dilip R.; Ulrich, Peter; Brines, Michael; Wuerth, Jean Paul; Cerami, Anthony; Lakatta, Edward G. (Intramural Research Program, Gerontology Research Center, National Institute on Aging, National Institutes of Health, Baltimore, MD, 21224, USA). Proceedings of the National Academy of Sciences of the United States of America, 98(3), 1171-1175 (English) 2001. CODEN: PNASA6. ISSN: 0027-8424. Publisher: National Academy of Sciences.
- AB . for 39 wk after 11 i.m. injections of ALT-711 at 1.0 mg/kg body weight every other day. Heart rate, brachial blood pressure, and body weight were unchanged by the drug. PWV and AGI decreased to a nadir at 6 wk [PWV to. . . 0.007; AGI to 41±7.3% of B, P = 0.046], and thereafter gradually returned to baseline. Concomitant increases in LV end diastolic diameter to  $116.7\pm2.7\%$  of B, P = 0.02; stroke volume index (SVindex) to  $173.1\pm40.1\%$  of B, P = 0.01; and systolic fractional shortening to 180±29.7% of B, P = 0.01 occurred after drug treatment The LV end systolic pressure/SVindex, an estimate of total LV vascular load, decreased to  $60\pm12.1\%$  of B (P = 0.02). The LV end systolic diameter/SVindex, an estimate of arterio-ventricular coupling, was improved (decreased to  $54.3\pm11\%$  of B, P < 0.002). Thus, in healthy older. . . pharmacol. therapy to improve impaired cardiovascular function that occurs in the context of heart failure associated with aging, diabetes, or hypertension, conditions in which arterial and ventricular stiffness are increased.
- IT **181069-80-7**, ALT-711

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(effects of cross-link breaker on arterial and ventricular properties
in aging rhesus monkeys)

IT 181069-80-7, ALT-711

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(effects of cross-link breaker on arterial and ventricular properties
in aging rhesus monkeys)

RN 181069-80-7 HCAPLUS

CN Thiazolium, 4,5-dimethyl-3-(2-oxo-2-phenylethyl)-, bromide (9CI) (CA INDEX NAME)

● Br-

L6 ANSWER 13 OF 18 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation on STN

AB Advanced glycation end product (AGE) formation that occurs with aging and diabetes leads to the cross-linking of proteins and subsequent changes in the physicochemical properties of tissues. Cellular responses to AGE that lead to either pathological conditions or removal of AGE are mediated by a number of receptors that have been identified on various cell types such as macrophages, endothelial cells, and smooth-muscle cells. Mechanisms by which AGE affect the cardiovascular system include AGE cross-linking of long-lived proteins such as collagen and elastin and altered cellular responses. Alagebrium (3-plenacyl-4,5-dimethylthiazolium chloride, ALT-711) is the first drug in a new class of thiazolium therapeutic agents that break established AGE cross-links between proteins. In animal studies, alagebrium was effective in reducing large artery stiffness, slowing pulsewave velocity, enhancing cardiac output, and improving left ventricular diastolic distensibility. In human studies to determine safety and efficacy, alagebrium was safe and well tolerated. the first phase 2 clinical study, alagebrium improved arterial compliance in elderly patients with vascular stiffening. In two subsequent phase 2 clinical studies, one addressing diastolic heart failure, and the other addressing systolic hypertension, alagebrium was effective, in improving cardiac function and uncontrolled sysiolic blood pressure, particularly in more severely affected patients. Additional clinical studies to determine the utility of alagebrium in creating cardiovascular disorders associated with aging are in progress. Copyright 2004 American Journal of Hypertension, Ltd.

2005:91053 Document Number: PREV200500090913. Advanced glycation end-product cross-link breakers - A novel approach to cardiovascular pathologies related to the aging process. Bakris, George L. [Reprint Author]; Bank, Alan J.; Kass, David A.; Neutel, Joel M.; Preston, Richard A.; Oparil, Suzanne. Med CtrDept Prevent Med, Rush Univ, 1700 W Van Buren, Suite 470, Chicago, IL, 60612, USA. George-Bakris@rush.edu. American Journal of Hypertension, (December 2004) Volume 17, Number 12, Suppl. S, Part 2, pp. 23S-30S. print.

CODEN: AJHYE6. ISSN: 0895-7061. Language: English.

AB. . . animal studies, alagebrium was effective in reducing large artery stiffness, slowing pulsewave velocity, enhancing cardiac output, and improving left ventricular diastolic distensibility. In human studies to determine safety and efficacy, alagebrium was safe and well tolerated. In the first phase 2. . . study, alagebrium improved

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arterial compliance in elderly patients with vascular stiffening.
     subsequent phase 2 clinical studies, one addressing diastolic
     heart failure, and the other addressing systolic
     hypertension, alagebrium was effective, in improving cardiac
     function and uncontrolled sysiolic blood pressure,
     particularly in more severely affected patients. Additional clinical
     studies to determine the utility of alagebrium in creating cardiovascular
     disorders associated with aging are in progress. Copyright 2004 American
     Journal of Hypertension, Ltd.
IT
        (Human Medicine, Medical Sciences); Pharmacology
IT
     Parts, Structures, & Systems of Organisms
        artery: circulatory system; heart: circulatory system
TΤ
          diastolic heart failure: heart disease, drug therapy
       Heart Failure, Congestive (MeSH)
IT
       left ventricular diastolic distensibility: heart disease,
       drug therapy
IT
     Diseases
          systolic hypertension: vascular disease, drug
        therapy
          Hypertension (MeSH)
IT
     Diseases
       vascular stiffening: vascular disease, drug therapy, epidemiology
IT
    Chemicals & Biochemicals
       advanced glycation end-products; alagebrium [ALT-711]:
        antihypertensive-drug, cardiotonic-drug, cardiovascular-drug,
       cross-link breaker, efficacy, preclinical trial, safety, tolerance,
        clinical trial; collagen; elastin
ΙT
    Miscellaneous Descriptors
       aging; cardiac function; cellular response; systolic
       blood pressure
RN
     181069-80-7Q (alagebrium)
       341028-37-3Q (alagebrium)
       181069-80-7Q (ALT-711)
       341028-37-3Q (ALT-711)
    ANSWER 14 OF 18 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation on
1.6
     STN
2004:401174 Document No.: PREV200400397666. Crosslink breakers: a new approach
     to cardiovascular therapy. Susic, Dinko [Reprint Author]; Varagic,
     Jasmina; Ahn, Jwari; Frohlich, Edward D.. Div ResHypertens Res Lab,
    Ochsner Clin Fdn, 1520 Jefferson Highway, New Orleans, LA, 70121, USA.
    Current Opinion in Cardiology, (July 2004) Vol. 19, No. 4, pp. 336-340.
    print.
    ISSN: 0268-4705 (ISSN print). Language: English.
IT
       disorders: vascular disease, drug therapy, mortality, therapy
       Cardiovascular Diseases (MeSH)
TΤ
       diabetes: endocrine disease/pancreas, metabolic disease
       Diabetes Mellitus (MeSH)
IT
     Diseases
          hypertension: vascular disease
          Hypertension (MeSH)
ΙT
    Diseases
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renal disorders: urologic disease, drug therapy, therapy
IT
     Chemicals & Biochemicals
        ALT-711: antidiabetic-drug, antihypertensive-drug,
        cardiovascular-drug, renal-acting-drug; advanced glycation
        end-products; collagen; glucose
RN
     181069-80-70 (ALT-711)
       341028-37-30 (ALT-711)
     50-99-7Q (glucose)
     58367-01-4Q (glucose)
L6
     ANSWER 15 OF 18 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation on
2004:378805 Document No.: PREV200400377419. Breaker of glycated collagen
     cross-links, ALT-711, improves left ventricular function and aortic
     distensibility in elderly spontaneously hypertensive rats.
     Susic, Dinko [Reprint Author]; Varagic, Jasmina; Ahn, Jwari; Matavelli,
     Louis C; Frohlich, Edward D.. Div Res, Alton Ochsner Med Fdn and Ochsner
     Clin, New Orleans, LA, 70121, USA. American Journal of Hypertension, (May
     2004) Vol. 17, No. 5, Part 2, pp. 169A. print.
     Meeting Info.: 19th Annual Scientific Meeting of the American Society of
     Hypertension. New York, NY, USA. May 18-22, 2004. American Society of
     Hypertension.
     CODEN: AJHYE6. ISSN: 0895-7061. Language: English.
ΤI
     Breaker of glycated collagen cross-links, ALT-711, improves left
     ventricular function and aortic distensibility in elderly spontaneously
     hypertensive rats.
IT
        diameter, distensibility, stiffness; carotid artery: circulatory
        system, right; femoral artery: circulatory system; heart ventricle:
        circulatory system, function, left
IT
          hypertension: vascular disease, pathology
          Hypertension (MeSH)
IT
     Diseases
        left ventricular dysfunction: heart disease, epidemiology, etiology,
        Ventricular Dysfunction, Left (MeSH)
     Chemicals & Biochemicals
IT
       ALT-711: collagen. .
TΤ
     Miscellaneous Descriptors
        aging; cardiac output; diastolic pressure; heart rate; mean
        arterial pressure; pulse pressure; pulse wave velocity; total
       peripheral resistance
ORGN Classifier
       Muridae
                  86375
     Super Taxa
        Rodentia; Mammalia; Vertebrata; Chordata; Animalia
     Organism Name
        spontaneously hypertensive rat (common): immature, mature,
        animal model, male
     Taxa Notes
       Animals, Chordates, Mammals, Nonhuman Vertebrates, Nonhuman Mammals,
        Rodents, Vertebrates
RN
     181069-80-70 (ALT-711)
       341028-37-30 (ALT-711)
L6
     ANSWER 16 OF 18 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation on
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STN 2004:378696 Document No.: PREV200400377310. A clinical trial of an age cross-link breaker, ALT-711, in systolic hypertension. Bakris, G. L. [Reprint Author]; Bank, A.; Kass, D. A.; Neutel, J.; Preston, R.. Med Ctr, Rush Univ, Chicago, IL, 60612, USA. American Journal of Hypertension, (May 2004) Vol. 17, No. 5, Part 2, pp. 127A-128A. print. Meeting Info.: 19th Annual Scientific Meeting of the American Society of Hypertension. New York, NY, USA. May 18-22, 2004. American Society of Hypertension. CODEN: AJHYE6. ISSN: 0895-7061. Language: English. ΤI A clinical trial of an age cross-link breaker, ALT-711, in systolic hypertension. IT Medicine, Medical Sciences); Pharmacology ITParts, Structures, & Systems of Organisms artery: circulatory system, pulse pressure; blood: blood and lymphatics, diastolic pressure, systolic pressure IΤ Diseases systolic hypertension: vascular disease, drug therapy, prevention and control Hypertension (MeSH) ΙT Chemicals & Biochemicals ALT-711: antihypertensive-drug, cardiovascular-drug, dosage, efficacy, novel advanced glycation end product cross-link breaker, safety, tolerability, clinical trial; advanced glycation end product: cross-link; antihypertension drug: antihypertensive -drug, cardiovascular-drug IT Methods & Equipment ambulatory blood pressure monitoring: clinical techniques, diagnostic techniques Miscellaneous Descriptors IT arterial compliance RN 181069-80-7Q (ALT-711) 341028-37-3Q (ALT-711) 1.6 ANSWER 17 OF 18 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation on 2004:35536 Document No.: PREV200400033330. Effect of ALT-711, a novel glucose cross-link breaker, in the treatment of diastolic heart failure. Kitzman, D. W. [Reprint Author]; Zile, M. R.; Little, W. C. [Reprint Author]; Hundley, W. G. [Reprint Author]; O'Brien, T. X.; DeGroof, R. C.. IM/Cardiology, Wake Forest University Health Sciences, Winston-Salem, NC, USA. European Heart Journal, (August-September 2003) Vol. 24, No. Abstract Supplement, pp. 408. print. Meeting Info.: Congress of the European Society of Cardiology. Vienna, Austria. August 30-September 03, 2003. European Society of Cardiology. ISSN: 0195-668X (ISSN print). Language: English. Effect of ALT-711, a novel glucose cross-link breaker, in the treatment of ΤI diastolic heart failure. IT & Systems of Organisms LV: circulatory system, mass, volume, left ventricle; aorta: circulatory system, distensibility; heart: circulatory system ΙT Diseases

diastolic heart failure: heart disease

Heart Failure, Congestive (MeSH)

Chemicals & Biochemicals

IT

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ACE inhibitor [angiotensin converting enzyme inhibitor]:
        angiotensin-converting enzyme inhibitor-drug,.
IT
     Methods & Equipment
        magnetic resonance imaging: clinical techniques, diagnostic techniques,
        imaging and microscopy techniques, laboratory techniques
    Miscellaneous Descriptors
IT
        LV diastolic filling [left ventricular diastolic
        filling]; blood pressure; early diastolic
        flow velocity; early diastolic mitral annulus velocity; peak
        exercise oxygen consumption; quality of life
     181069-80-7Q (ALT-711)
RN
       341028-37-30 (ALT-711)
L6
     ANSWER 18 OF 18 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation on
2001:184349 Document No.: PREV200100184349. Cardiovascular effects of an
     advanced glycation end product breaker ALT-711 in adult spontaneously
     hypertensive rats. Varagic, Jasmina [Reprint author]; Susic, Dinko
     [Reprint author]; Frohlich, Edward D. [Reprint author]. Alton Ochsner
     Medical Foundation, New Orleans, LA, USA. Journal of the American College
     of Cardiology, (February, 2001)_Vol. 37, No. 2 Supplement A, pp.
     290A-291A. print.
     Meeting Info.: 50th Annual Scientific Session of the American College of
     Cardiology. Orlando, Florida, USA. March 18-21, 2001. American College of
     Cardiology.
     CODEN: JACCDI. ISSN: 0735-1097. Language: English.
     Cardiovascular effects of an advanced glycation end product breaker
ΤI
     ALT-711 in adult spontaneously hypertensive rats.
IT
Miscellaneous Descriptors
        coronary flow reserve; coronary hemodynamics; left ventricular coronary
        blood flow; left ventricular function; mean arterial pressure; minimal
        coronary vascular resistance; systemic
        hemodynamics; total peripheral resistance; Meeting Abstract
ORGN Classifier
       Muridae
                  86375
     Super Taxa
        Rodentia; Mammalia; Vertebrata; Chordata; Animalia
     Organism Name
        spontaneously hypertensive rat: adult, animal model, male
        Animals, Chordates, Mammals, Nonhuman Vertebrates, Nonhuman Mammals,
        Rodents, Vertebrates
RN
     181069-80-7Q (ALT-711)
       341028-37-30 (ALT-711)
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L3 47 S L1 SSS FULL

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L4 71 S L3

L5 63 DUP REM L4 (8 DUPLICATES REMOVED)

L6 18 S L5 AND (SYSTOL? OR HYPERTENS? OR DIASTOL? OR BLOOD(2A) PRESSUR

L7 0 S L6 AND HYDROCHLOROTHIAZ?

FILE 'REGISTRY' ENTERED AT 16:41:54 ON 04 AUG 2005

E HYDROCHLOROTHIAZIDE/CN

L8 1 S E3

FILE 'MEDLINE, HCAPLUS, BIOSIS, EMBASE' ENTERED AT 16:42:33 ON 04 AUG 2005

L9 25687 S L8

L10 0 S L6 AND L9

FILE 'STNGUIDE' ENTERED AT 16:43:52 ON 04 AUG 2005

FILE 'MEDLINE, HCAPLUS, BIOSIS, EMBASE' ENTERED AT 16:45:53 ON 04 AUG 2005

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L11 2 L4 AND L9

=> d l11 abs cbib kwic hitstr 1-2

L11 ANSWER 1 OF 2 HCAPLUS COPYRIGHT 2005 ACS on STN

AB Claimed are compns. comprising a polypeptide and an active agent covalently attached to the polypeptide and a method for delivery of an active agent to a patient by administering the composition to the patient. The peptide is a homopolymer of a naturally occurring amino acid or a heteropolymer of two or more naturally occurring amino acids. In an example, (Glu)n-cephalexin was prepared from Glu(OBut)NCA and cephalexin hydrochloride.

2002:556104 Document Number 137:109489 Compositions comprising a polypeptide and an active agent. Piccariello, Thomas; Olon, Lawrence P.; Kirk, Randal J. (USA). U.S. Pat. Appl. Publ. US 2002099013 A1 20020725, 34 pp.

Delacroix

(English). CODEN: USXXCO. APPLICATION: US 2001-933708 20010822. PRIORITY: US 2000-PV247928; 20001114; US 2000-PV247621; 20001114; US 2000-PV247620; 20001114; US 2000-PV247595; 20001114; US 2000-PV247594; 20001114; US 2000-PV247635; 20001114; US 2000-PV247634; 20001114; US 2000-PV247606; 20001114; US 2000-PV247607; 20001114; US 2000-PV247608; 20001114; US 2000-PV247609; 20001114; US 2000-PV247610; 20001114; US 2000-PV247611; 20001114; US 2000-PV247702; 20001114; US 2000-PV247701; 20001114; US 2000-PV247700; 20001114; US 2000-PV247699; 20001114; US 2000-PV247698; 20001114; US 2000-PV247807; 20001114; US 2000-PV247833; 20001114.

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1,1-dioxide (6CI, 8CI, 9CI) (CA INDEX NAME)

IT

RN CN RN 181069-80-7 HCAPLUS
CN Thiazolium, 4,5-dimethyl-3-(2-oxo-2-phenylethyl)-, bromide (9CI) (CF INDEX NAME)

ANSWER 2 OF 2 HCAPLUS COPYRIGHT 2005 ACS on STN

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Claimed are compns. comprising a polypeptide and an active agent covalently attached to the polypeptide and a method for delivery of an active agent to a patient by administering the composition to the patient. The peptide is a homopolymer of a naturally occurring amino acid or a heteropolymer of two or more naturally occurring amino acids. In an example, (Glu)n-cephalexin was prepared from Glu(OBut)NCA and cephalexin hydrochloride. 2002:332011 Document Number 136:355482 Compositions comprising a polypeptide and an active agent. Piccariello, Thomas; Olon, Lawrence P.; Kirk, Randall J. (New River Pharmaceuticals, Inc., USA). PCT Int. Appl. WO 2002034237 A1 20020502, 98 pp. DESIGNATED STATES: W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM; RW: AT, BE, BF, BJ, CF, CG, CH, CI, CM, CY, DE, DK, ES, FI, FR, GA, GB, GR, IE, IT, LU, MC, ML, MR, NE, NL, PT, SE, SN, TD, TG, TR. (English). CODEN: PIXXD2. APPLICATION: WO 2001-US26142 20010822. PRIORITY: US 2000-642820 20000822. IT 50-06-6, Phenobarbital, biological studies 50-18-0, Cyclophosphamide 50-35-1, Thalidomide 50-44-2, Mercaptopurine 50-78-2, Acetylsalicylic 50-81-7, Vitamin C, biological studies 51-21-8, Fluorouracil 51-61-6, Dopamine, biological studies 51-63-8, Dextroamphetamine sulfate 51-98-9, Norethindrone acetate 52-01-7, Spironolactone 52-24-4, 53-36-1, Methylprednisolone Acetate Thiotepa 52-86-8, Haloperidol 54-31-9, Furosemide 55-63-0, Nitroglycerin 57-63-6, Ethinyl estradiol 58-08-2, Caffeine, biological studies 58-18-4, Methyltestosterone 58-25-3, Chlordiazepoxide 58-33-3, Promethazine hydrochloride 58-55-9, Theophylline, biological studies 58-61-7, Adenosine, biological studies 58-93-5, Hydrochlorothiazide 59-42-7, Phenylephrine 60-54-8, Tetracycline 60-87-7, Promethazine 64-31-3, Morphine Sulfate 67-20-9, Nitrofurantoin 67-92-5, Dicyclomine hydrochloride 68-19-9, 68-22-4, Norethindrone 71-58-9, Medroxyprogesterone Vitamin B12 71-68-1, Hydromorphone hydrochloride 74-79-3, Arginine, acetate biological studies 76-41-5, Oxymorphone 76-42-6, Oxycodone 76-58-4,

Ethylmorphine 78-44-4, Carisoprodol 84-02-6, Prochlorperazine maleate 87-08-1, Penicillin V 87-33-2, Isosorbide Dinitrate 89-57-6, 90-82-4, Pseudoephedrine 93-14-1, Guaifenesin Mesalamine 113-45-1, 113-92-8, Chlorpheniramine maleate Methylphenidate 113-52-0 114-07-8, Erythromycin 124-90-3, Oxycodone hydrochloride 125-28-0, Dihydrocodeine 125-29-1, Hydrocodone 125-33-7, Primidone Dextromethorphan 128-13-2, Ursodiol 129-06-6, Warfarin Sodium 132-17-2, Benzatropine methanesulfonate 132-22-9, Chlorpheniramine 143-52-2, Methyldihydromorphinone 143-71-5, Hydrocodone bitartrate 152-11-4, Verapamil hydrochloride 297-76-7, Ethynodiol diacetate 298-46-4, Carbamazepine 298-59-9, Methylphenidate hydrochloride 303-49-1, Clomipramine 315-30-0, Allopurinol 318-98-9, Propranolol Hydrochloride 378-44-9, Betamethasone 379-79-3, Ergotamine Tartrate 437-38-7, Fentanyl 439-14-5, Diazepam 446-86-6, Azathioprine 466-99-9, Hydromorphone 469-62-5, Propoxyphene 509-60-4, Dihydromorphine 514-36-3, Fludrocortisone acetate 541-15-1, Levocarnitine 549-18-8, Amitriptyline hydrochloride 554-13-2, Lithium Carbonate 561-27-3, Diacetylmorphine 595-33-5, Megestrol acetate 604-75-1, Oxazepam 630-93-3, Sodium phenytoin 657-24-9, Metformin 745-65-3, Alprostadil 747-36-4, Hydroxychloroguine sulfate 797-63-7, Levonorgestrel 846-49-1, Lorazepam 846-50-4, Temazepam 894-71-3, Nortriptyline hydrochloride 959-24-0, Sotalol hydrochloride 1134-47-0, 1403-66-3, Gentamicin 1404-93-9, Vancomycin hydrochloride Baclofen 1501-84-4, Rimantadine hydrochloride 1508-65-2, Oxybutynin chloride 1622-61-3, Clonazepam 1665-48-1, Metaxalone 1744-22-5, Riluzole 1951-25-3, Amiodarone 2078-54-8, Propofol 2152-34-3, Pemoline 2375-03-3, Methylprednisolone sodium succinate 4205-91-8 4682-36-4, Orphenadrine citrate 4759-48-2, Isotretinoin 5786-21-0, Clozapine 6202-23-9, Cyclobenzaprine hydrochloride 6493-05-6, Pentoxifylline 6533-00-2, Norgestrel 7280-37-7, Estropipate 7414-83-7, Etidronate disodium 9002-60-2, Adrenocorticotrophic hormone, biological studies 9002-69-1, Relaxin 9005-49-6, Heparin, biological studies 9014-42-0, Thrombopoietin 9039-53-6, Urokinase 9041-08-1, Dalteparin sodium 9041-92-3,  $\alpha$ .1-Protease inhibitor 9080-79-9, Sodium polystyrene sulfonate 10238-21-8, Glyburide 11005-12-2,  $\beta$ -Phytosterol 11056-06-7, Bleomycin 11140-85-5, Glucagon hydrochloride Flutamide 13614-98-7, Minocycline hydrochloride 14124-50-6, Hydrochlorothiazide-triamterene mixture 14611-52-0, Selegiline hydrochloride 14838-15-4, Phenylpropanolamine 15307-79-6, Diclofenac sodium 15663-27-1, Cisplatin 15686-71-2, Cephalexin 17140-78-2, Propoxyphene napsylate 17560-51-9, Metolazone 18559-94-9, Albuterol 19767-45-4, Mesna 20537-88-6, Amifostine 20830-75-5, Digoxin 21062-37-3D, analogs 21256-18-8, Oxaprozin 21829-25-4, Nifedipine 22071-15-4, Ketoprofen 23031-32-5, Terbutaline sulfate 25316-40-9, Doxorubicin hydrochloride 25322-68-3, Polyethylene glycol 25332-39-2, 25614-03-3, Bromocriptine Trazodone hydrochloride 26159-34-2, Naproxen 26787-78-0, Amoxicillin 27164-46-1, Cefazolin sodium 28860-95-9, Carbidopa 28981-97-7, Alprazolam 27314-97-2, Tirapazamine 29094-61-9, Glipizide 29354-16-3, Thyronine, iodo-31677-93-7, 32222-06-3, Calcitriol 32780-64-6, Labetalol Bupropion hydrochloride hydrochloride 33069-62-4, Paclitaxel hydrochloride 33419-42-0, Etoposide 33286-22-5, Diltiazem 33564-30-6, Cefoxitin sodium 34552-83-5, Loperamide hydrochloride 34580-13-7, Ketotifen 35189-28-7, 36282-47-0, Tramadol hydrochloride 36505-84-7, Buspirone Norgestimate 36791-04-5, Ribavirin 37296-80-3, Colestipol hydrochloride 38398-32-2, Ganaxolone 41340-25-4, Etodolac 41575-94-4, Carboplatin 42200-33-9, 42617-41-4, Activated protein C 42924-53-8, Nabumetone Nadolol

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49842-07-1, Tobramycin sulfate
     49562-28-9, Fenofibrate
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                50700-72-6, Vecuronium bromide 51321-79-0, Sparfosic acid
     Cefadroxil
     51481-61-9, Cimetidine
                            51773-92-3, Mefloquine hydrochloride
     52232-67-4, Teriparatide
                                53885-35-1, Ticlopidine hydrochloride
     53994-73-3, Cefaclor
                           54024-22-5, Desogestrel 54143-56-5, Flecainide
              54182-58-0, Sucralfate 54910-89-3, Fluoxetine
     acetate
                                                                  54965-24-1.
     Tamoxifen citrate 55079-83-9, Acitretin 56180-94-0, Acarbose 56238-63-2, Cefuroxime sodium 57109-90-7, Clorazepate dipotassium
     57248-88-1, Pamidronate disodium 57852-57-0, Idarubicin hydrochloride
     58579-51-4, Anagrelide hydrochloride 58786-99-5, Butorphanol tartrate
     59122-46-2, Misoprostol 59703-84-3, Piperacillin sodium 59729-32-7,
     Citalopram hydrobromide
                               59865-13-3, Cyclosporin 59989-18-3, Eniluracil
     60142-96-3, Gabapentin 60205-81-4, Ipratropium 60748-06-3, Gastrin 17
     61718-82-9, Fluvoxamine maleate 62288-83-9, Desmopressin acetate
     62571-86-2, Captopril 63074-08-8, Terazosin hydrochloride 63675-72-9,
    Nisoldipine 64221-86-9, Imipenem 64461-82-1, Tizanidine hydrochloride
     64485-93-4, Cefotaxime sodium 64544-07-6, Cefuroxime axetil
     65277-42-1, Ketoconazole 65646-68-6, Fenretinide 65807-02-5, Goserelin
     66085-59-4, Nimodipine
                            66104-22-1, Pergolide 66357-35-5, Ranitidine
                              67889-72-9, Acetaminophen-codeine phosphate mixture
     66722-44-9, Bisoprolol
     67992-58-9, Sodium ioxaglate 68562-41-4, Mecasermin
                                                            68693-11-8,
    Modafinil
               68844-77-9, Astemizole 69655-05-6, Didanosine
                                                                    70458-96-7.
    Norfloxacin 70476-82-3, Mitoxantrone hydrochloride
                                                            72509-76-3,
                 72558-82-8, Ceftazidime 72956-09-3, Carvedilol [opromide 73573-87-2, Formoterol 73590-58-6, Omeprazole
     Felodipine
    73334-07-3, İopromide
     74103-06-3, Ketorolac
    RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
        (compns. comprising a polypeptide and an active agent)
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     74191-85-8, Doxazosin 74356-00-6, Cefotetan disodium
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                        74469-00-4, Amoxicillin-potassium clavulanate mixture
    Leuprolide acetate
     75330-75-5, Lovastatin 75695-93-1, Isradipine
                                                      75706-12-6, Leflunomide
     75847-73-3, Enalapril 75970-99-9, Norastemizole 76470-66-1, Loracarbef
     76547-98-3, Lisinopril
                             76584-70-8, Divalproex sodium
                                                              76820-74-1,
     Sodium meglumine ioxaglate
                                  76824-35-6, Famotidine
                                                           76963-41-2,
    Nizatidine
                 78246-49-8, Paroxetine hydrochloride
                                                        78628-80-5,
    Terbinafine hydrochloride 78755-81-4, Flumazenil 79307-93-0,
    Azelastine hydrochloride
                                79350-37-1, Cefixime
                                                      79517-01-4, Octreotide
    acetate
              79794-75-5, Loratadine
                                       79902-63-9, Simvastatin 81098-60-4,
                 81103-11-9, Clarithromycin
                                              81129-83-1, Cilastatin sodium
    81131-70-6, Pravastatin sodium 81409-90-7, Cabergoline 81627-83-0,
             82410-32-0, Ganciclovir 82419-36-1, Ofloxacin
                                                                82586-52-5,
    Moexipril hydrochloride
                               82586-55-8, Quinapril hydrochloride
    82626-48-0, Zolpidem 82640-04-8, Raloxifene hydrochloride
                                                                   82657-92-9,
    Prourokinase
                    82752-99-6, Nefazodone hydrochloride 83015-26-3,
                83881-52-1, Cetirizine hydrochloride
    Tomoxetine
                                                        83905-01-5,
                   83928-66-9, Gepirone hydrochloride
    Azithromycin
                                                         84057-84-1,
    Lamotrigine 84485-00-7, Sibutramine hydrochloride
                                                           84625-61-6,
                  85650-52-8, Mirtazapine 85721-33-1, Ciprofloxacin
    Itraconazole
    86050-77-3, Gadopentetate dimeglumine 86386-73-4, Fluconazole 86541-74-4, Benazepril hydrochloride 87239-81-4, Cefpodoxime proxetil
     87333-19-5, Ramipril
                            87679-37-6, Trandolapril
                                                       90357-06-5, Bicalutamide
     90566-53-3, Fluticasone
                               91374-20-8, Ropinirole hydrochloride
     91421-42-0, Rubitecan 91832-40-5, Cefdinir
                                                    92134-98-0, Fosphenytoin
     sodium
             92339-11-2, Iodixanol 92665-29-7, Cefprozil
                                                              93379-54-5,
    Esatenolol
                93479-97-1, Glimepiride
                                            93957-54-1, Fluvastatin
     95233-18-4, Atovaquone 95635-56-6, Ranolazine hydrochloride
     95896-08-5, Anaritide 96036-03-2, Meropenem 96829-58-2, Orlistat
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96946-42-8, Cisatracurium besylate 97240-79-4, Topiramate Troglitazone 97519-39-6, Ceftibuten 98048-97-6, Fosinopril 98319-26-7, Finasteride 98418-47-4, Metoprolol succinate 99300-78-4. Venlafaxine hydrochloride 99614-01-4, Ondansetron hydrochloride 100286-90-6, Irinotecan hydrochloride 100286-97-3, Milrinone lactate 100986-85-4, Levofloxacin 103475-41-8, Tepoxalin 103577-45-3, Lansoprazole 104227-87-4, Famciclovir 104632-25-9, Pramipexole 106266-06-2, Risperidone 106392-12-5, Poloxamer 188 dihydrochloride 106861-44-3, Mivacurium chloride 107007-99-8, Granisetron hydrochloride 107753-78-6, Zafirlukast 111470-99-6, Amlodipine besylate 111974-72-2, Quetiapine fumarate 112108-01-7, Ecopipam 112529-15-4, Pioglitazone hydrochloride 112573-73-6, Ecadotril 112733-06-9, Zenarestat 113427-24-0, Epoetin alfa 114977-28-5, Docetaxel 115956-13-3, Dolasetron mesylate 116539-59-4, Duloxetine 117976-90-6, Rabeprazole 118390-30-0, Interferon alfacon-1 119302-91-9, Rocuronium 119413-54-6, Topotecan hydrochloride 120011-70-3, Donepezil hydrochloride 120066-54-8, Gadoteridol 120202-66-6, Clopidogrel bisulfate 120511-73-1, Anastrozole 120635-74-7, Cilansetron 121032-29-9, Nelarabine 121181-53-1D, PEGylated 121584-18-7, Valspodar 122111-03-9, Gemcitabine hydrochloride 123122-55-4, Candoxatril 123258-84-4, Itasetron 124584-08-3, Nesiritide 124750-99-8, Losartan potassium 124832-27-5, Valacyclovir hydrochloride 124937-52-6, Tolterodine tartrate 125317-39-7, Vinorelbine tartrate 126544-47-6. Ciclesonide 127254-12-0, Sitafloxacin 127779-20-8, Saquinavir 128298-28-2, Remacemide 128794-94-5, Mycophenolate mofetil 129318-43-0, Alendronate sodium 129580-63-8, Satraplatin 129618-40-2, Nevirapine 129722-12-9, Aripiprazole 130018-77-8, Levocetirizine 130325-35-8, PD 135158 131918-61-1, Paricalcitol 132449-46-8, Lesopitron 132539-06-1, Olanzapine 133107-64-9, Insulin lispro 133737-32-3, Pagoclone 134523-03-8, Atorvastatin calcium 134564-82-2, Befloxatone 134678-17-4, Lamivudine 135062-02-1, Repaglinide 135306-42-2, BW 1555U88 135354-02-8, Xaliproden 137234-62-9, Voriconazole 137281-23-3, Pemetrexed 137862-53-4, Valsartan 138402-11-6, Irbesartan 138531-07-4, Sinapultide 138660-96-5, Sevirumab 139264-17-8, Zolmitriptan 140207-93-8, Pentosan polysulfate 141579-67-1, A 78773 141732-76-5, Exendin-4 142340-99-6, 142373-60-2, Tirofiban hydrochloride Adefovir dipivoxil Ilomastat 143201-11-0, Cerivastatin sodium 143388-64-1, Naratriptan hydrochloride 144980-29-0, Repinotan 145040-37-5, Candesartan cilexetil 145202-66-0, Rizatriptan benzoate 145258-61-3, Interferon β1 (human fibroblast protein moiety) 145375-43-5, Mitiglinide 145821-59-6, Tiagabine hydrochloride 145941-26-0, Oprelvekin 146479-72-3 147059-75-4, Trovafloxacin mesylate 147245-92-9, Glatiramer acetate 147536-97-8, Bosentan 148553-50-8, Pregabalin 148883-56-1, Tifacogin 149824-15-7, Ilodecakin 149845-06-7, Saquinavir mesylate 149950-60-7, Emivirine 151035-56-2 151063-30-8, Lisinopril-hydrochlorothiazide mixture 151319-34-5, Zaleplon 151767-02-1, Montelukast sodium 152751-57-0, Sevelamer hydrochloride 153168-05-9, Pleconaril 153259-65-5, Cilomilast 153438-49-4, Dapitant 153439-40-8, Fexofenadine hydrochloride 153773-82-1, MK 826 154039-60-8, Marimastat 154248-97-2, Imiglucerase 154361-50-9, Capecitabine 154598-52-4, Efavirenz 155141-29-0, Rosiglitazone maleate 155213-67-5, Ritonavir 156154-37-9, Losartan-hydrochlorothiazide mixture 157263-00-8, L 159282 157542-49-9, CS 834 157810-81-6, Indinavir sulfate 159989-65-8, Nelfinavir mesylate 160135-92-2 161814-49-161814-49-9. Amprenavir 162011-90-7, Rofecoxib 162808-62-0, Caspofungin 164656-23-9, Dutasteride 166089-32-3, Lintuzumab 166374-48-7, CVT 124

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166518-60-1, Avasimibe 169148-63-4, NN 304 169590-42-5, Celecoxib 170277-31-3, Infliximab 171228-49-2, Posaconazole 171599-83-0, Sildenafil citrate 178961-24-5, 264W94 179120-92-4, Altinicline 181695-72-7, 180288-69-1, Trastuzumab 181069-80-7, ALT 711 182167-03-9, EM 800 183547-57-1, Gantofiban Valdecoxib 183552-38-7, 185243-69-0, Etanercept 187348-17-0, Edodekin alfa Abarelix 187523-35-9, BMS 204352 188039-54-5, Palivizumab 188062-50-2, Abacavir sulfate 188627-80-7, Eptifibatide 189013-61-4, 4030W92 192329-42-3, Prinomastat 193079-69-5, Tabimorelin 198153-51-4, Peginterferon 198283-73-7, ABT 594 202138-50-9, Tenofovir disoproxil alfa-2a 202409-33-4, Etoricoxib fumarate 205110-48-1, ABT 773 208538-73-2, 210101-16-9, Conivaptan 223652-82-2, BMS 284756 332348-12-6, FK 463 BMS 188667

RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses) (compns. comprising a polypeptide and an active agent)

2H-1,2,4-Benzothiadiazine-7-sulfonamide, 6-chloro-3,4-dihydro-, 1,1-dioxide (6CI, 8CI, 9CI) (CA INDEX NAME)

$$\begin{array}{c|c} C1 & H \\ N \\ H_2N-S \\ 0 & O \end{array}$$

RN 181069-80-7 HCAPLUS
CN Thiazolium, 4,5-dimethyl-3-(2-oxo-2-phenylethyl)-, bromide (9CI) (CAINDEX NAME)

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